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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,107	10/06/2003	Sung Uk Moon	243563US90	1076
22850	7590	11/28/2006	EXAMINER	
C. IRVIN MCCLELLAND OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			FILE, ERIN M	
			ART UNIT	PAPER NUMBER
			2611	

DATE MAILED: 11/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

sf

Office Action Summary	Application No.	Applicant(s)	
	10/678,107	MOON ET AL.	
	Examiner	Art Unit	
	Erin M. File	2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>8/4/2005</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The term "the number of multiple codes" in claims 1, 2, and 7 is unclear and is not described in the specification. In Claim 5, "to manage a situation of a radio resource" is unclear and is not sufficiently described to enable one skilled in the art at the time of invention.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 1, 2, 6, 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Aizawa et al. (U.S. 2002/0106989).

Claims 1, 2, Aizawa discloses:

- a communication quality acquirer configured to acquire a communication quality of a signal transmitted from the plurality of mobile stations by the multicast communication ([0094], lines 3-4, fig. 7, 301);
- a transmission method changer configured to change a transmission method for an encoding rate (fig. 7, 111, [0161])
- a transmitter configured to transmit the signal to the plurality of mobile stations using the changed transmission method ([0025], lines 3-5, fig. 7, 104).

Claim 6, Aizawa further discloses the communication quality includes a signal error rate ([0070], lines 4-11).

Claim 7, Aizawa discloses:

- measuring a communication quality of a signal transmitted from the radio station, in each of the mobile stations ([0094], lines 3-4, fig. 7, 301);
- acquiring the communication quality from the plurality of mobile stations, in the radio station ([0094], lines 3-4, fig. 7, 301, 302);
- a transmission method changer configured to change a transmission method for an encoding rate (fig. 7, 111, [0161])
- transmitting the signal to the plurality of mobile stations using the changed transmission method, in the radio station ([0025], lines 3-5, fig. 7, 104).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aizawa et al. (U.S. 2002/0106989) as applied to claim 2 above, and further in view of Kim et al. (U.S. Pub. No. 2003/0119452).

Claim 3, Aizawa discloses that the transmission method changer changes the transmission method in accordance with a difference calculated between a channel quality information and a reference value ([0074]). Aizawa fails to disclose communication quality acquirer selects the lowest communication quality from among the acquired communication qualities, however, Kim discloses communication quality acquirer selects the lowest communication quality from among the acquired communication qualities ([0014], lines 8-13). Because Kim discloses that this method of transmission control increases the service quality ([0010], lines 22-24), it would have been obvious to one skilled in the art at the time of invention to incorporate the use of the lowest channel quality information as disclosed by Kim into the invention of Aizawa.

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7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aizawa et al. (U.S. 2002/0106989) as applied to claim 2 above, and further in view of Liu (U.S. Pub. No. 2004/0203476).

Claim 4, Aizawa discloses that the transmission method changer changes the transmission method in accordance with a difference calculated between a channel quality information and a reference value ([0074]). Aizawa fails to disclose the communication quality acquirer calculates an average value of the communication qualities acquired from the plurality of mobile stations, however, Liu discloses an average of channel quality information (CQI) is calculated to determine the channel quality ([0018], lines 8-11). Liu discloses that using the average channel conditions instead of a single channel condition allows the efficient utilization of resources ([0015], lines 9-13). Because of this advantage, it would have been obvious to one skilled in the art at the time of invention to incorporate the channel averaging as disclosed by Liu into the invention as disclosed by Aizawa.

Claim Objections

8. Claims 1, 2, and 7 are objected to because of the following informalities: the recitation "a transmission method changer configured to change a transmission method for at least one of an error encoding rate, the number of repeated bits, an interleave length, the number of multiple codes and the number of transmission signal repetitions" is somewhat unclear. The examiner suggests changing the recitation to: "a transmission method changer configured to change

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a transmission method by changing at least one of the: an error encoding rate, the number of repeated bits, an interleave length, the number of multiple codes and the number of transmission signal repetitions".

Appropriate correction is required.

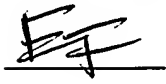
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erin M. File whose telephone number is (571)272-6040. The examiner can normally be reached on M-F 1:00PM-9:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

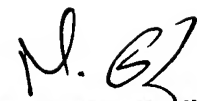
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Erin M. File



11/20/2006



MOHAMMED SHAIOUR
SUPERVISORY PATENT EXAMINER